

Grade 4 Math**Subclaim: Supporting Content**

The standard designation is included preceding each evidence statement.

Evidence Statements may:

1. Use exact standard language
2. Be derived by focusing on specific parts of a standard
3. Be integrative - the testing of more than one of the standards on a single item/task without going beyond the standards to create new requirements

Evidence Statements	Clarifications	Relationship to Mathematical Practices
Operations and Algebra (OA)		
4.OA.4-1 Find all factor pairs for a whole number in the range 1–100.		MP.7
4.OA.4-2 Recognize that a whole number is a multiple of each of its factors.		MP.2
4.OA.4-3 Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number		MP.8
4.OA.4-4 Determine whether a given whole number in the range 1–100 is prime or composite.		MP.7, MP.8
4.OA.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule “Add 3” and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.	<ul style="list-style-type: none">●Tasks do not require students to determine a rule; the rule is given.●75% of patterns should be number patterns	MP.8
Measurement and Data (MD)		
4.MD.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two- column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ...		MP.5, MP.8

4.MD.2-1 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, in problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	<ul style="list-style-type: none"> ● Situations involve whole number measurements and require expressing measurements given in a larger unit in terms of a smaller unit. ● Tasks may present number line diagrams featuring a measurement scale. <ul style="list-style-type: none"> ● Tasks may include measuring distances to the nearest cm or mm. ● Units of mass are limited to grams and kilograms. 	MP.4, MP.5
4.MD.2-2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, in problems involving simple fractions. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	<ul style="list-style-type: none"> ● Situations involve two measurements given in the same units, one a whole-number measurement and the other a non-whole-number measurement (given as a fraction). ● Tasks may present number line diagrams featuring a measurement scale. ● Tasks may include measuring distances to the nearest cm or mm. ● Units of mass are limited to grams and kilograms. ● Tasks will not include division of fractions. 	MP.4, MP.5
4.MD.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.		MP.2, MP.5
4.MD.4-1 Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$).	<ul style="list-style-type: none"> ● Tasks may include mixed numbers with stated denominators. ● Fractions equivalent to whole numbers are limited to 0 through 5. 	MP.5
4.MD.4-2 Solve problems involving addition and subtraction of fractions by using information presented in line plots. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.		MP.4, MP.5
4.MD.5 Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement. a. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through $\frac{1}{360}$ of a circle is called a "one-degree angle," and can be used to measure angles. b. An angle that turns through n one-degree angles is said to have an angle measure of n degrees.		MP.2
4.MD.6 Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.		MP.2, MP.5

4.MD.7 Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real-world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.		MP.1, MP.7
Geometry (G)		
4.G.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two dimensional figures.		MP.5
4.G.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.	<ul style="list-style-type: none"> ●A trapezoid is defined as “A quadrilateral with at least one pair of parallel sides.” ●Tasks may include terminology: equilateral, isosceles, scalene, acute, right, and obtuse. 	MP.7
4.G.3 Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.		